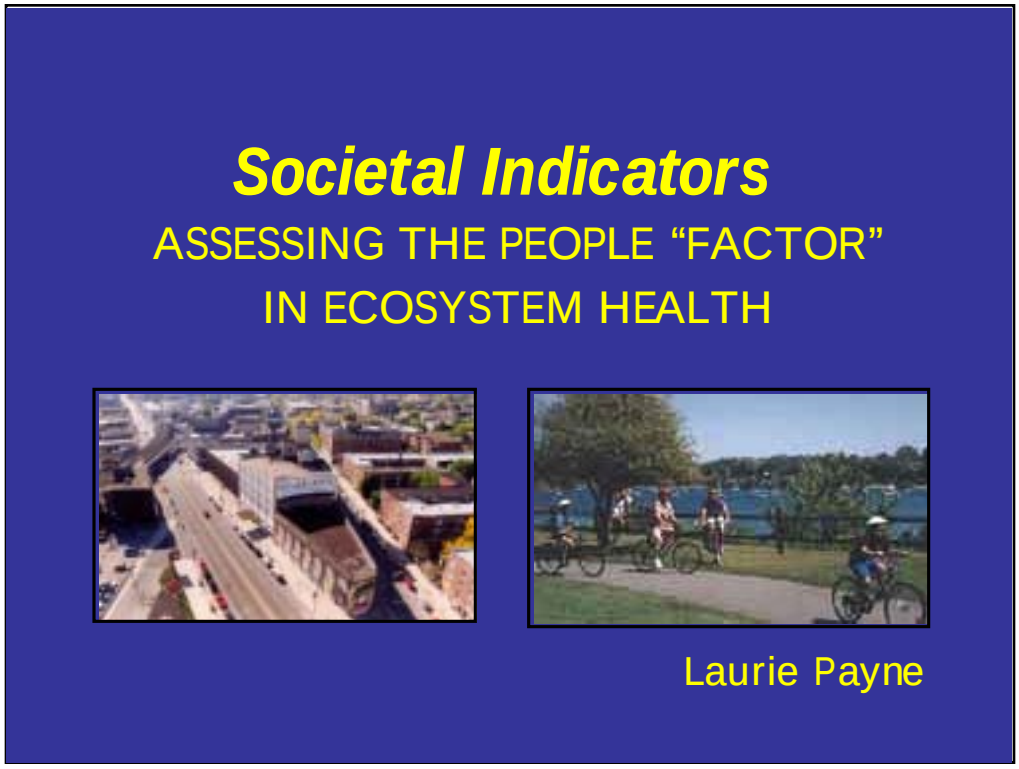


Thank you Paul. I am honored to be given the opportunity present this topic to you. Particularly, because societal activities have such a central impact on the health of the Great Lakes basin.

Maybe some of you thought that you were attending a conference on **Lakes**. Well you **have** received information on that, but I am here to provide a different perspective. I am going to present the proposed Great Lakes societal indicator suite.

Yesterday, we heard about many of the pressures impacting on the health of the Great Lakes ecosystem. Many of these relate to our daily activities. Because of this relationship, participants at past SOLECs recommended that a suite of indicators be developed to assess the pressures that we, as the residents of the Great Lakes basin, impose on our ecosystem.

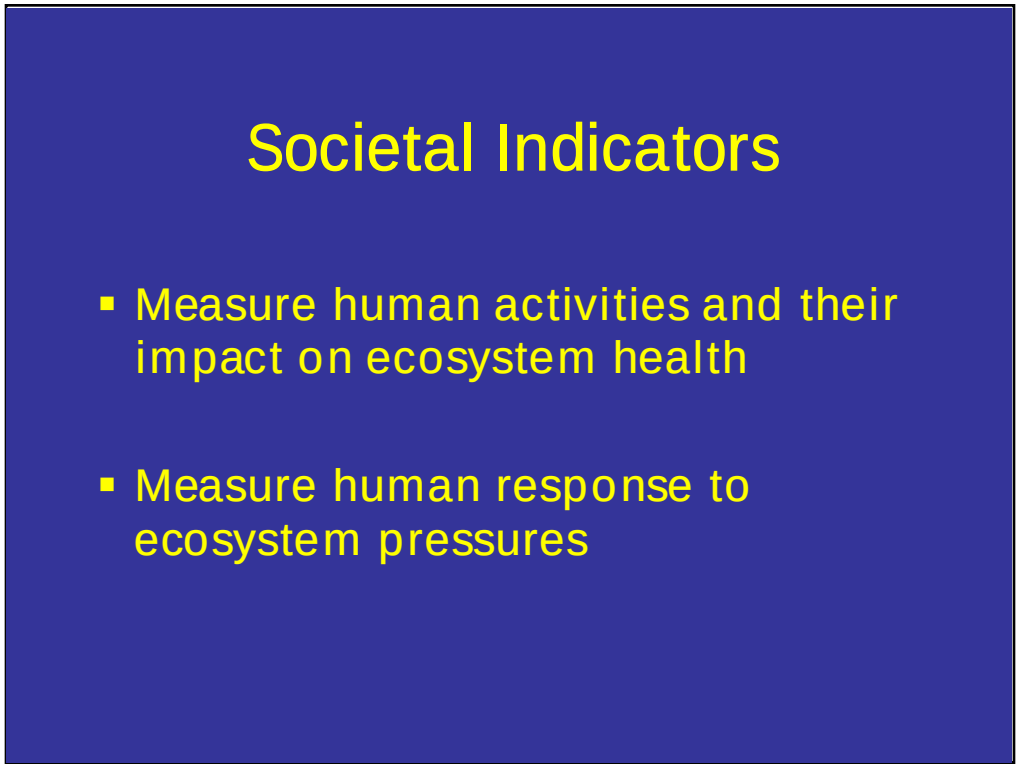
Great Lakes indicators have been developed to assess human influence on some of the pressures on ecosystem health. A subset of these, Societal response indicators, have been designed to assess voluntary action to reduce ecosystem pressures.

I am excited because there have been many new developments in this indicator group.
This year there are more societal indicators being reported. As well, we are getting closer to a set of indicators for human response activities.

I am going to give you an overview of the **proposed** indicators. There will be more details at the societal breakout sessions this afternoon. So please join us.

Though evolved from a great deal of past work, the proposed societal response indicators, as a complete set, are entirely new.

Over the next fifteen minutes or so, I will tell you how the response indicators were developed, present the proposed set of indicators, highlight some preliminary assessments and, finally, look ahead to the work still to be done.



Societal indicators are about the interface between human systems and natural systems.

They measure human activities and their impact on ecosystem health.

The societal response indicators are a subset of the societal indicators. These indicators measure human response to ecosystem pressures.

The GOAL of all these indicators is: To quantify, simplify and communicate the status and trends in Societal

Activities, to invoke ultimately, positive change in ecosystem health.

WHY ARE THESE INDICATORS IMPORTANT AT A STATE of the LAKES ECOSYSTEM CONFERENCE?

It is important to report trends in societal activities since there are such close linkages between everyday human activities and our ability to swim in the lakes, eat the fish, breathe clean air and drink the water. For example, I think it safe to say that the reason that Lakes Superior and Huron are generally healthier than say Lakes Ontario and Erie, is at least in part because there are many more people in the Lake Ontario and Erie basins.

We need to report on societal indictors and reinforce the linkages between societal activities and the state of the ecosystem so that we can of determine the most effective management activities and to inform public policy initiatives.

The first societal indicators were reported at SOLEC 2000. There are even more societal indicator assessments being reported this year, some of which are being reported for the first time.

Throughout the conference and in the conference literature, you will have the opportunity to hear about indicators that assess the societal pressures being placed on the ecosystem. Such as solid waste generation. water use, urban density and energy consumption.

Yesterday we heard about some of the ecosystem pressures affecting the state of the Great Lakes Basin. Many of these relate to societal activities such as land development, energy use and materials consumption patterns. For example, increasing beach closures are closely related to urban water use and wastewater management.

Similarly, increasing urbanization contributes to a variety of negative impacts on ecosystem health such as wetland loss and increased contaminant loading in the water due to urban runoff.

Societal Indicators Reported in 2002

- Place-Based Stewardship Activities
- Green Planning Processes
- Brownfield Redevelopment
- Mass Transit

Photo: Rob Hutchinson

Photo: Morris Richardson II/Detroit News

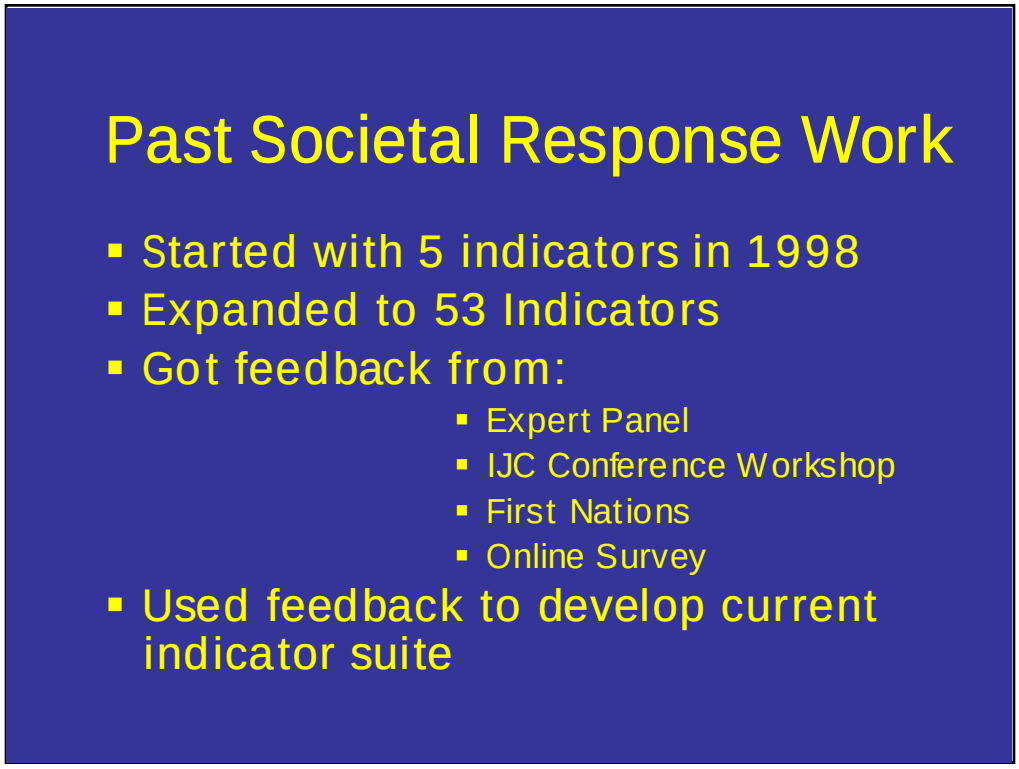
John Gannon also reported on some societal activities that are having a positive effect on the system. We heard about increasing amounts of land under protection by land trusts and about increasing participation in recycling. Just this morning, Patrick Colgan, of the Royal Botanical Gardens, highlighted an excellent example of community efforts to enhance the health of the ecosystem in Cootes Paradise.

Some other human response type indictor assessments that you will hear about include: place based stewardship activities, green planning processes, brownfield redevelopment and mass transit.

As promised I am going to focus on the societal response indicators, which recognize that all residents, businesses and governments in the Basin have a role to play in protecting our ecosystem health. They recognize that there are many activities in the basin that can promote the integrity of the system.

The goal is to: Assess the trends in **voluntary** ecosystem protection activities. To assess trends in activities that invoke positive change in the health of the Great Lakes system

The caption that really summarizes the societal response indicators is that they are measures of shared governance and responsible management.



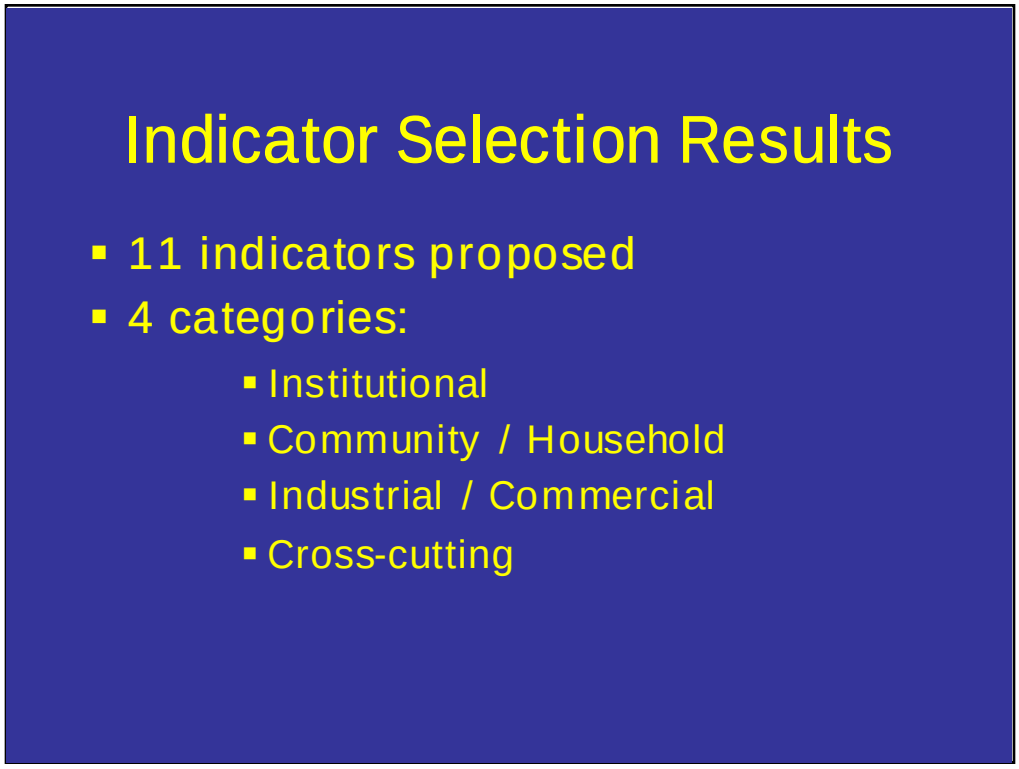
The societal response suite started with 5 proposed indicators back in 1998.

In true SOLEC style, these first five spawned so many new ideas that the list quickly grew to 53 indicators.

These indicators were developed through various activities: consultations with experts in the field, workshops and first nation consultations, to name a few. Most recently, an online survey was conducted to further evaluate the suite.

We used the feedback from these events and other discussions to refine our indicator list.

SO WHAT DID WE END UP WITH?



Well, with the feedback we received. we have narrowed the list to 11 indicators in four categories. Institutional, community/household, industrial/commercial and cross-cutting.

These categories have been recommended by various people over the past few years and have so far been effective in targeting indicators toward various sectors of society.

After several years of hard work, this year we think we are close to a working set of indicators for the societal response section.

Without going into detail I will outline the 11 indicators being proposed for the societal response suite. (detail is available in the paper on new and revised indicators that you received in your registration package, and at the workshop session of course).

Under the household/community category 3 indicators are proposed, we have:

Community Engagement in Great Lakes Protection and Decision-Making, which includes land trust activities, participation in stream protection groups and management planning activities.

We also look at household solid waste minimization, such as recycling and composting.

Finally, we look at household stormwater recycling.

Stormwater can also be a significant contributor of contaminants to our lakes and rivers. Household stormwater recycling activities, such as the use of rainbarrels, can help alleviate some of these pressures.

The second category that I will describe are the commercial/industrial response indicators.

Industrial indicators were largely developed from some great feedback that was obtained from the SOLEC/IJC Workshop held in Montreal last year.

There are two proposed indicators in this grouping. First is participation in Environmental Management Systems. The second indicator relates participation in eco-efficiency programs.

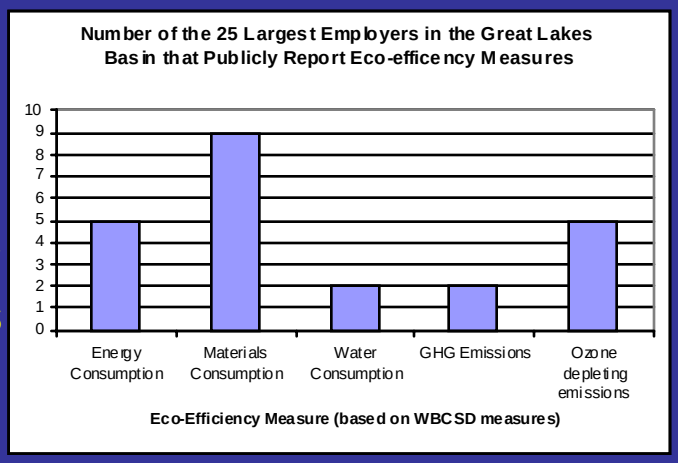
Eco-efficiency is a concept developed by the industrial sector that looks for environmental solutions that also provide economic benefits.

These two indicators have been developed because they have the particular advantage of being adaptable to a wide variety of organizations. And they address many aspects of environmental performance.

Pilot Report #1 –

Industrial / Commercial Eco-efficiency

- 10/25 firms report on eco-efficiency measures



A second pilot project was conducted for the commercial/industrial eco-efficiency indicator.

In this report, public reporting produced by the 25 largest employers in the basin, was used to gather information on corporate environmental reporting in the areas of energy, water an materials consumption, as well as green house gas and ozone depleting emissions.

What was found was that nearly all firms at least mentioned environmental activities either in their annual report, on their website or in other publications. However, only 10 of the 25 studied report on measures of eco-efficiency, with materials consumption being the most common measure. And only 2 report on all 5 parameters.

This is the first time this indicator has been measured in the Basin and is a relatively new concept world wide. Therefore, an assessment is not yet possible, but over time we will be able to measure trends in commercial/industrial ecoefficiency.

The institutional category comprises all levels of government as well as the educational and health care systems.

The indicators in this category include:

Level of wastewater treatment.

Taxes on energy and carbon dioxide, which relates the ecosystem pressures caused by toxic air emissions and climate change.

Environmental education

Institutional

- Cosmetic pesticide control
- Financial resources allocated to Great Lakes Programs

Other indicators we are examining in the institutional set are:

Cosmetic pesticide control, an issue that is attracting a lot of attention lately.

And finally…

Financial resources allocated to Great Lakes Programs

Pilot Report #2 –

Cosmetic Pesticide Controls

- 46 municipalities have recently adopted pesticide control by-laws/ordinances (Ontario & Quebec)
- Another 28 in the process of implementing by-laws
- Quebec implementing province-wide controls

To give you an example of how these indicators are reported, pilot projects have been done for a few of the indicators. The first one I am going to present to you is related to cosmetic pesticide controls (that is for weed and pest control in gardens and parks).

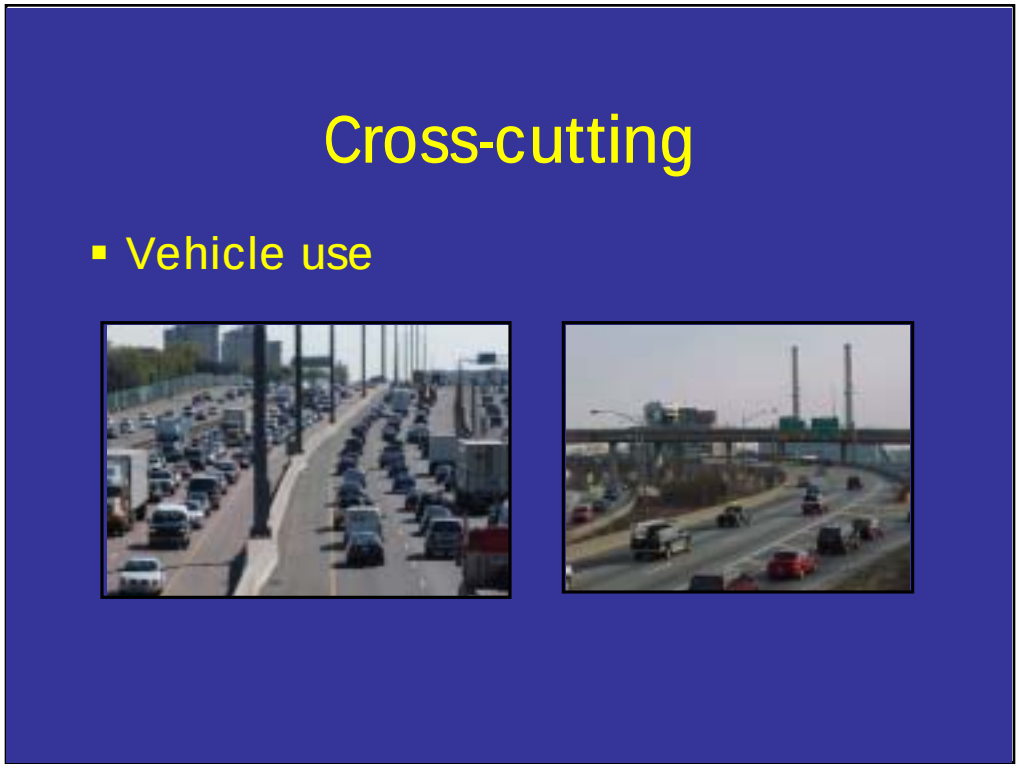
Improper or intensive pesticide use can have significant effects on human and ecosystem health. The potential risks is particularly high for children.

Because of this, momentum has been building toward more stringent controls on pesticide use in urban areas, particularly cosmetic pesticide use. Municipalities in the basin have begun to propose or implement pesticide control by-laws or ordinances.

So far: 46 municipalities have adopted by-laws and an additional 28 are in the process of doing so.

Most of the initiatives to regulate cosmetic pesticide use have taken place in Ontario and Quebec, however, Cleveland Heights, a suburb of Cleveland has also started to control cosmetic pesticides. Growing interest in this issue at the municipal level,makes this an indicator worth watching.

While there is no assessment yet, since this is the first time an indicator such as this has been reported, I think that over time we should see increasing trends in the control of cosmetic pesticides on both sides of the border.

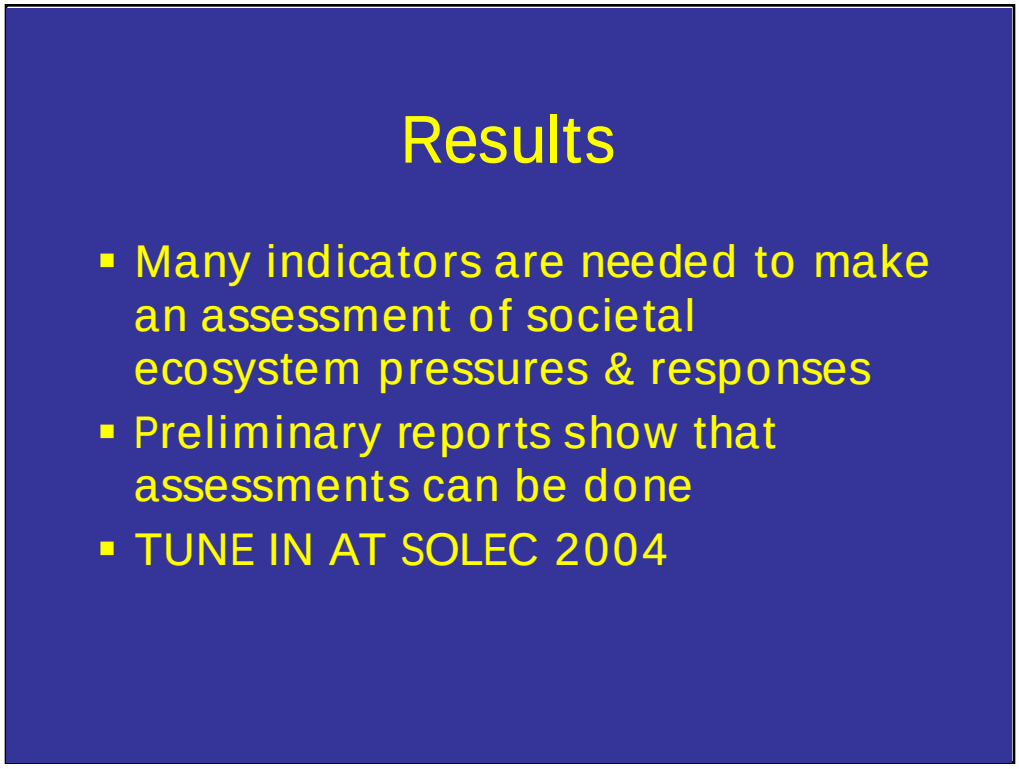


The indicator that can be a relevant measure with respect to all three sectors, and has an enormous impact on ecosystem health, is vehicle use. We have designed this indicator to look at industrial, institutional and household sectors.

Vehicle use is both a pressure indicator as well as a response indicator. If we start seeing declining trends in vehicle use that would signify a positive societal response to the pressures induced from private, commercial and public vehicles.

There is no doubt that there could be many more societal response indicators but these 11 indicators sample the range of human activities that address key pressures that affect the health of the ecosystem: Waste, water management, energy, education, air emissions and other contaminants.

Without overtaxing our time and financial resources, these indicators give us a strong indication of changing attitudes and awareness of great lakes issues. They give us an indication of trends societal commitment to improving the state of the lakes.



These preliminary assessments provide early clues as to the level of societal response to ecosystem pressures. Over time we will be able to monitor trends in societal response and use the data to make policy and management decisions.

Though important and relevant, these examples are not enough to provide an assessment of social behavior. The intricate nature of our social structure requires several indicators to draw any conclusions about societal ecosystem pressures & responses.

What these preliminary reports do show, is that the assessments can be done **and**, they can be done with existing data sources, limited budgets and limited time.

Bear in mind, These indicators are still being finalized and so you'll have to come back in 2 years to get a more detailed assessment.

On that note, I want to finish off with a bit of a to do list.

Most immediately we are hoping that we can get some feedback on the proposed set of indicators in this afternoon's breakout sessions.

We will continue to gather information to assist in indicator reporting.

A key priority is to further define linkages to other indicators and other work going on in the basin.

Again. I'd like to invite you to attend the societal indicator workshop this afternoon. At 12:45 or 3:15

Acknowledgements

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Thanks to all those who helped develop the societal indicators and thank you for listening.